IN THE SPECIFICATION

Please add at page 1, before line 3, the following paragraph:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a Continuation of International Patent Application No. PCT/JP02/08517, filed August 23, 2002, and claims priority from the following Japanese Patent Applications: No. 2001-254700, filed August 24, 2001, No. 2001-256301, filed August 27, 2001, and No. 2001-296605, filed September 27, 2001. The entire contents of these applications are incorporated herein by reference in their entireties.

Please amend the paragraph beginning at page 15, line 20, to page 16, line 18, as follows:

Then, at least ~~convex~~ concave portions of them are filled with a homogeneous refractive index transparent material 3 having a refractive index n_s (which ~~equals~~ is equal to the ordinary refractive index n_o or the extraordinary refractive index n_e) to form polarizing diffraction gratings on the transparent substrate 4 and the transparent substrate 5, and thereafter, the transparent substrate 4, the transparent substrate 5 and the transparent substrate 6 are laminated to form a multi-layer diffraction type polarizer 100. Here, "at least ~~convex~~ concave portions" means that either only the ~~convex~~ concave portions are filled or both the concavo and convex portions are filled to be covered. Here, the homogeneous refractive index transparent material means a transparent material whose refractive index is isotropic. The longitudinal directions as the direction of grooves of the convex portions of the grating on the transparent substrate 4 and that of the transparent substrate 5 may be in parallel or perpendicular or at a predetermined angle to each other. Since diffracted light produced by the diffraction grating is in a direction perpendicular to the longitudinal direction of the grating, it is possible to produce the diffracted light in a desired direction by making the

longitudinal directions of the diffraction grating 1 and the diffraction grating 2 to have a predetermined angle.

Please amend the paragraph at page 34, lines 3-19, as follows:

As shown in Fig. 10, the fast axis direction (the direction which provides the ordinary refractive index) of birefringent material layers constituting the multi-layer diffraction type polarizers 110 and 120 bonded to the liquid crystal element 200 by employing a transparent adhesive (not shown), is formed at an angle of 45° in a case of the multi-layer diffraction type polarizer 110, and at an angle of 135° in a case of the multi-layer diffraction type polarizer 120 with respect to X-axis in an XY plane in Fig. 4. Namely, two diffraction gratings in the multi-layer diffraction type polarizer 110 are linear type ~~polarizers~~ gratings, and longitudinal directions of their gratings are at an angle of 45° to X-axis direction. Two diffraction gratings in the multi-layer diffraction type polarizer 120 are also linear type ~~polarizers~~ gratings, and longitudinal directions of their gratings are at an angle of 135° to X-axis direction.

Please amend the paragraph at page 53, lines 8-16, as follows:

Here, the ellipticity (a ratio a/b of the minor axis amplitude (a) to the major axis amplitude [[b]] (b) of the output elliptically polarized light) showing the linearity of the output linearly polarized light, showed a high linearity of at most 0.01 in a wavelength band of from 1400 nm to 1700 nm, and a polarization rotator was obtained, which can rotate the polarization direction of the output light from 150° to 60° in accordance with the applied voltage of from 0 to 10 V.

Please delete the paragraph at page 55, lines 1-7.